205 Psychological Disturbances of Vegetative Function

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Definition

Vegetative functions are those bodily processes most directly concerned with maintenance of life. This category encompasses nutritional, metabolic, and endocrine functions including eating, sleeping, menstruation, bowel function, bladder activity, and sexual performance. These functions can be altered by a wide variety of psychologic states.

Technique

Problems in vegetative function are so frequent that every patient with an emotional disorder should be asked about disturbances in food intake, elimination, menstruation, and sleep. What the clinician primarily investigates is a psychologically induced change, which may be either increased or decreased, in the patient's usual pattern.

By the time questions related to vegetative function are explored, the physician will have already sought for evidence of anxiety, depression, or interpersonal difficulties in other parts of the psychiatric database. Then the physician determines whether there is an association between the vegetative function disturbances and emotional conflicts. In doing this, it is helpful to ask such questions as the following: "Did the bodily disturbance (e.g., anorexia) begin during a time of emotional stress? Does it become worse when emotional stress increases? Does it vary in different situations?"

With the exception of the sexual area (see Chapter 216), most patients do not find it difficult to discuss problems related to their vegetative functions. Almost everyone has experienced disturbances in these bodily functions at some time, and there is little or no stigma attached to admitting to these difficulties. There is usually a temporal and a quantifiable relationship between the emotional symptoms and disturbance in vegetative function. Increase or decrease in emotional symptoms is often accompanied by concomitant changes in the disturbance of vegetative function. Characteristically, increased emotional stress is associated with increased vegetative dysfunction.

It is also important when exploring this area to ask in a general way about any disturbances of physical function for which past physicians could find no cause. The patient can be asked: "Have you ever had any physical problem for which your physician could find no cause?" The patient could also be asked: "Have you ever been told that you were having physical symptoms as a result of nervousness, depression, or stress?"

It is important to ask patients specifically about the presence of any eating disorders, such as anorexia nervosa or bulimia, both of which are discussed later in this chapter. Patients with either disorder are often very secretive. They will almost never volunteer any information regarding their symptoms. Nevertheless, when asked directly about binge eating, self-induced vomiting, or use of cathartics or diuretics in order to lose weight, many patients will admit to these activities. In addition, the physician should always be alert for the possibility of anorexia nervosa in any female patient who appears emaciated.

Basic Science

The early work of investigators Flanders Dunbar, Franz Alexander, W. B. Cannon, Hans Selye, and others have provided validation of the concept that emotional conflicts can result in changes in physical function. Efforts to link specific personality types or specific psychological conflicts with specific psychophysiological disorders have been attempted many times. For example, the type A personality has been described as being particularly prone to coronary occlusion. The type A personality is typically competitive, restless, and preoccupied with time. Such individuals characteristically also have physiologic findings that include high plasma triglycerides, hyperinsulinemic response to glucose challenge, increased blood cholesterol levels, and increased levels of norepinephrine in urine. Despite the fact that many patients with coronary artery disease appear to fit the type A personality, many patients with coronary artery disease do not fit this personality type. While it seems reasonable on the basis of current investigations to view patients who have a type A personality as being more prone to coronary disease, it also seems clear that this is by no means the entire explanation for this condition.

John Nemiah and Peter Sifneos (1970) have postulated the interesting concept of *alexithymia*. Alexithymia refers to the condition of being unable to express feeling tones verbally. In this hypothesis, psychosomatic symptoms are developed as an alternative expression of affect as a result of the inability to express and deal with feelings verbally.

Modern neurologic research has made it much easier to understand how emotional conflicts can result in changes in vegetative function. Many of the neuronal circuits controlling emotions are centered in the limbic system of the brain. The limbic system has many pathways connecting to autonomic centers in the hypothalamus. When emotional stress leads to increased limbic system activity, there are ample neuronal connections for transmission of this increased activity into hypothalamic areas that control autonomic function. Changes in the output of these autonomic centers pass through the autonomic nervous system to end organs such as the bowel and bladder. Presumably asthma, hypertension, peptic ulcer, and other psychophysiologic disorders are the result, at least in part, of long-continued overactivity of the autonomic nervous system on the various end organs.

Clinical Significance

The extent to which usual vegetative function is disrupted by emotional conflict allows the clinician to make a rough judgment of the severity of the emotional disturbance. A psychiatric condition in which there is an accompanying disturbance in vegetative function is in general more severe than the same condition without such a bodily disturbance. The presence of a distinct change in vegetative function is of more significance than the direction of the change, since patients with the same emotional symptoms may show opposite changes in bodily function. For example, most depressed patients have decreased appetite, but some such patients overeat, as is described below.

Disturbances in the following areas of vegetative function are of particular significance:

- Appetite
- Sleep
- Menstruation
- Bowel habits
- Bladder function
- Sexual performance

Food is of strong emotional significance. Infants are repeatedly comforted by being offered food. Many people associate the process of eating with feelings of security, comfort, and happiness. For some, eating can become a means of alleviating mild anxiety or depression. This tendency to eat in response to stress is thought to be a factor in some cases of obesity. Although some patients react to depression by overeating, these are usually those in whom depression is mild. The majority of patients with significant depression have a distinct loss of appetite. In a somewhat similar way, an occasional patient with anxiety may react by increasing food consumption. The large majority of patients with moderate to severe anxiety have some degree of decrease in appetite, although characteristically this is not as marked as is seen in depression.

Anorexia nervosa is a particularly important disturbance of eating. Patients with this condition have an intense fear of becoming obese, and this fear does not subside as weight loss progresses. Unless adequately treated, the persistent refusal of these patients to eat may lead to death from complications of starvation. Bulimia is another eating disorder that is of clinical importance. Bulimia refers to the condition in which patients experience recurrent episodes during which large amounts of food are consumed in a short period of time. These episodes are typically referred to as *binges*. Patients with bulimia frequently terminate the episodes with self-induced vomiting. Patients with either anorexia nervosa or bulimia may use cathartics or diuretics in an effort to lose weight. More than 90% of patients with anorexia nervosa are female, as are a large majority of patients with bulimia. Although fatalities occur less often from bulimia than from anorexia nervosa, serious medical complications can result from bulimia, including esophagitis, dental damage, and toxicity from use of cathartics or diuretics.

Disturbances in sleep involve difficulties in getting to sleep, staying asleep, and in quality of sleep. Difficulty falling asleep occurs in many patients who have either anxiety or depression. A pattern of insomnia that occurs primarily in depression is one in which the patient is able to fall asleep but awakens after a few hours and then is unable to return to sleep. Many patients with emotional conflicts are troubled by disturbing dreams. Such patients often complain of feeling very tired when they awaken in the morning. Some patients respond to emotional stress by withdrawal. The clinician should remember that one form of withdrawal can be sleep. A minority of such patients, much more frequently depressed patients than anxious ones, will sleep excessively.

In the presence of marked emotional stress, female patients not infrequently show a change in their menstrual pattern. Menstrual abnormalities occur in several psychiatric conditions. Patients with marked depression often show a decrease in menstruation that may progress to cessation of menstruation. Amenorrhea also occurs in anorexia nervosa. In these patients, the amenorrhea is usually secondary to starvation. Amenorrhea also occurs in pseudocyesis, which is a condition of false pregnancy found in certain women who have psychologic conflicts around an intense desire to become pregnant.

Changes in bowel habits are frequent in emotional disturbances. Diarrhea often occurs during anxiety states. Constipation frequently accompanies depression.

Disturbances of genitourinary function are infrequent in depression. However, the presence of anxiety is often manifest by increased frequency of urination.

Sexual performance is strongly influenced by emotional stress. Impotence or frigidity are frequent complaints in states of anxiety and in depression. Resolution of emotional conflicts will frequently return sexual performance to normal (see also Chapters 187 and 216 on Impotence and Frigidity).

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